## ABSTRACT OF THE DISCLOSURE

A radial piston pump for high-pressure fuel generation in fuel injection systems of internal combustion engines has a drive shaft which is mounted in a pump casing, an eccentric shaft section on which a running roller is mounted, and a plurality of pistons, which are arranged in a respective cylinder radially with respect to the drive shaft. Each piston has a piston footplate, which makes contact with the circumferential surface of the running roller, at their ends facing the running roller. The surface of the piston footplate which is in contact with the circumferential surface of the running roller consists of a wear-resistant material, namely hard metal, a ceramic material, a cast carbide material or cermet. Alternatively or in addition, at least part of the running roller consists of the wear-resistant material. Alternatively or in addition, the piston could consist of a ceramic material.